

Amendments to the Claims:

1. (Original) An optical fiber having an elevated threshold for stimulated Brillouin scattering comprising:
a longitudinally extending core having a first index of refraction and a first acoustic wave propagation velocity;
a cladding surrounding said core and extending lengthwise therealong, said cladding having a second index of refraction that is less than the first index of refraction of said core, said cladding also having a second acoustic wave propagation velocity that is less than the first acoustic wave propagation velocity in order to guide optical waves through said core while antiguiding acoustic waves; and
an irregular coating disposed on said cladding that varies in a lengthwise direction in order to alter a mode profile of the acoustic waves, wherein said irregular coating is comprised of an acoustically dampening material that is acoustically matched to said cladding.

Claim 2 (Canceled).

3. (Original) An optical fiber according to Claim 1 wherein said irregular coating has a density that varies randomly in a lengthwise direction.

4. (Original) An optical fiber according to Claim 1 wherein said core comprises aluminum oxide as a dopant.

5. (Original) An optical fiber according to Claim 1 wherein said cladding comprises a dopant selected from the group consisting of fluorine and boron oxide.

6. (Original) An optical fiber according to Claim 1 wherein said cladding has a lateral thickness that varies irregularly in a lengthwise direction in order to alter a mode profile of the acoustic waves.